

217/782-2113

"REVISED"
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - REVISED
NSPS SOURCE

PERMITTEE

Farmland Foods, Inc., a Delaware Corporation
Attn: Isaac Yoder
1220 North 6th Road
Monmouth, Illinois 61462

<u>Application No.:</u> 73032333	<u>I.D. No.:</u> 187015AAY
<u>Applicant's Designation:</u> 2005 UPGRADE	<u>Date Received:</u> February 28, 2005
<u>Subject:</u> Pork Processing Plant	
<u>Date Issued:</u> May 3, 2005	<u>Expiration Date:</u> April 13, 2006
<u>Location:</u> 1220 North 6th Street Road, Monmouth	

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of 3 boilers (60.41 mmBtu, 25.11 mmBtu, and 39.4 mmBtu), 2 hog singer systems (5.1 mmBtu), a hammermill with dust collection, hog hair hydrolizer, hog hair dryer with cyclone, edible rendering enclosed system (consisting of 7 cookers, 2 flash tanks, 3 finished lard storage tanks, a lard holding tank, lard filter, and a collection tank), inedible rendering system (consisting of 7 cookers) controlled by a cyclone, 2 condensers, 2 water towers, wastewater pretreatment system, Chad sanitizing system with mist eliminators, and 11 vacuum pumps, pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., sulfur dioxide to less than 100 tons/year). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. The 60.41 mmBtu/hr boiler is subject to a New Source Performance Standard (NSPS) for small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois, on behalf of the USEPA under a delegation agreement.
- b. The Permittee shall maintain records of the sulfur content of each fuel delivery based on fuel supplier verification, pursuant to 40 CFR 60.44c(h).

- c. When firing fuel oil, the opacity from the 60.41 mmBtu/hr boiler shall not exceed 20% during normal operation, except for one 6 minute period per hour of not more than 27%, pursuant to 40 CFR 60.43c.
 - d. At all times the Permittee shall maintain and operate the boilers, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emission, pursuant to 40 CFR 60.11(d).
3. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
 4. Emissions and operation of fuel combustion in the boilers and hog singers shall not exceed the following limits:

<u>Fuel Type</u>	<u>Consumption</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>		<u>Factor</u> <u>(Lb/mmscf)</u>	<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Natural Gas	58	580	NO _x	100	5,800	29.00
			CO	84	4,872	24.36
			PM	7.6	441	2.20
			VOM	5.5	319	1.60
			SO ₂	0.6	35	0.17

These limits are based on standard AP-42 emission factors and information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

5. Emissions and operation of fuel combustion in the boilers shall not exceed the following limits:

<u>Fuel Type</u>	<u>Consumption</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>		<u>Factor</u> <u>(Lb/1,000 Gal)</u>	<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Fuel Oil	325,000	1,6000,000	SO ₂	42.6	13,845	34.08
			NO _x	20.0	6,500	16
			CO	5.0	1,625	4
			PM	2.0	650	1.6
			VOM	0.252	81.9	0.20

These limits are based on standard AP-42 emission factors, a maximum sulfur content of 0.3% and information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

6. Emissions and operation of 3 smokehouses shall not exceed the following limits:

<u>Product</u>	<u>Throughput</u>		<u>Pollutant</u>	<u>Emission Factor</u> (Lb/T of Wood)	<u>Emissions</u>	
	<u>(T/Mo)</u>	<u>(T/Yr)</u>			<u>(Lb/Mo)</u>	<u>(T/Yr)</u>
Wood	65	700	PM	54	3,510	18.9
			VOM	44	2,860	15.4

These limits are based on standard AP-42 emission factors and information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

7. Emissions and operation of wastewater pretreatment shall not exceed the following limits:

<u>Process</u>	<u>Throughput</u>		<u>Maximum VOM</u> <u>Content</u> (Lb/1,000 Gal)	<u>Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>		<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Wastewater Pretreatment	36,500,000	438,000,000	0.00131	48	0.29

These limits are based on maximum wastewater throughput and results from U.S. Environmental Protection Agency WATER9 program. Compliance with annual limits shall be determined from a running total of 12 months of data.

8. Emissions and operation of water pretreatment shall not exceed the following limits:

<u>Process</u>	<u>Throughput</u>		<u>Maximum VOM</u> <u>Content</u> (Lb/Gal)	<u>Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>		<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Cleaning Solvents	35	350	0.015	5	0.02

These limits are based on complete volatilization of the VOC content of the solution and a maximum density of 8.34 lb/gal. Compliance with annual limits shall be determined from a running total of 12 months of data.

9. Emissions and operation of miscellaneous processes shall not exceed the following limits:

<u>Process</u>	<u>Throughput</u>		<u>PM</u> <u>Emission</u> <u>Factor</u> (Lb/Ton)	<u>Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>		<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Edible Rendering	1,640	16,400	0.4	656	3.28
Inedible Rendering	3,060	30,600	0.2	612	3.06
Hog Hair Dryer with Cyclone	624	6,240	0.4	249.6	1.25

These limits are based on standard AP-42 emission factors and information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

10. This permit is issued based on negligible emissions of volatile organic material from edible rendering system, inedible rendering system, 11 vacuum pumps, Chad sanitizing system, and hog hair hydrolizer. For this purpose emissions each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr
11. This permit is issued based on negligible emissions of particulate matter (PM) from 2 hog singers, hammermill with dust collection, Chad sanitizing system, and 11 vacuum pumps. For this purpose emissions each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr.
- 12a. At the above location, the Permittee shall not keep, store, or utilize a fuel with a sulfur content greater than 0.3 weight percent.
 - b. The Illinois EPA shall be allowed to sample all fuels stored at the source.
- 13a. Within 90 days of a written request from the Illinois EPA, pursuant to 35 Ill Adm. Code Section 201.282, the emissions and opacity of the exhaust from any emission source or any air pollution control equipment of the plant shall be measured by an approved testing service, during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.
 - b.
 - i. The following methods and procedures shall be used for testing of emissions. Refer to 40 CFR 60, Appendix A for USEPA test methods.

Opacity	USEPA Method 9
Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Particulate Matter	USEPA Method 5
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxide	USEPA Method 7
 - ii. A test shall consist of three separate runs each at least 60 minutes in duration. Compliance shall be determined from the average of the runs provided that the Illinois EPA may accept the arithmetic mean of the two runs in circumstances described in 40 CFR 60.8(f).
 - c. Testing shall be performed by a qualified independent testing service.

- d. At least 30 days prior to the actual date of testing a written test plan shall be submitted to the Illinois EPA for review and approval. A copy shall also be submitted to the USEPA. This plan shall describe the specific procedures for testing, including:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum operating rate, the levels of operating parameters at or within which compliance is intended to be shown, if applicable, and the means by which the operating parameters for the process and any control equipment will be determined.
- e. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the tests. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe the testing.
- 14. The Permittee shall maintain operating and maintenance logs for each control system, including: maintenance activities, with date and description of inspections, repair actions, and equipment or filter bag replacements, etc.
- 15. The Final Report(s) for all tests shall be submitted within 180 days after the date of the test. The Final Report shall include as a minimum:
 - a. General information describing the test, including the name and identification of the emission source which was tested, date of test, names of personnel performing the tests, and Illinois EPA observers, if any;
 - b. A summary of results;
 - c. Description of test procedures, including description of sampling points, test equipment, and test schedule;
 - d. Detailed description of test conditions, including:
 - i. Process information, i.e., process rate, fuel type, and firing rate.
 - ii. Control equipment information, i.e., equipment condition and operating parameters during testing.

- e. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
16. The Permittee shall maintain monthly and annual records of the following:
- a. Natural gas usage (mmscf/mo and mmscf/yr);
 - b. Fuel oil usage and sulfur content (gallons/mo and gallons/yr);
 - c. Wood consumed in the smokehouses (tons/mo and tons/yr);
 - d. Lard production from edible rendering (tons/mo and tons/yr);
 - e. Inedible rendering product (tons/mo and tons/yr);
 - f. Treated wastewater (gallons/mo and gallons/yr);
 - g. Hammermill throughput (tons/mo and tons/yr);
 - h. Hog hair throughput of the hog hair dryer (tons/mo and tons/yr); and
 - i. Cleaning solvent usage (gallons/mo and gallons/yr).
17. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
18. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
19. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

20. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in process or installation of controls, in order to eliminate the nuisance.
21. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year:
 - a. Fuel type and consumption;
 - b. Amount of treated wastewater;
 - c. Amount of wood consumed by the smokehouses.

Please note that this permit has been revised to incorporate Construction Permit 05020077 (upgrading wastewater pretreatment).

If you have any questions on this, please call George Kennedy at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:GMK:psj

cc: Illinois EPA, FOS Region 2
Illinois EPA, Compliance Section (#40)
USEPA

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from pork processing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The plant is demonstrating compliance through the following limitations: fuel combustion usage (580 mmscf/yr of natural gas and 1,600,000 gallons/yr of fuel oil), 700 tons/yr of wood consumed by the smokehouses, 30,600 tons/yr of inedible rendering, 16,400 tons/yr of edible rendering, 6,240 tons/yr of hair processed, and 438,000,000 gallons of treated wastewater. The resulting maximum emissions are below the levels, e.g., 100 tons/yr of sulfur dioxide (SO₂) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

	E M I S S I O N S (Tons/Year)				
	<u>NO_x</u>	<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>PM</u>
3 Boilers					
Natural Gas	29	24.36	0.17	1.60	2.20
#2 Oil	16	4.00	34.08	0.20	1.60
2 Hog Singer Systems					0.44
Hog Hair Hydrolyzed				0.44	
Hog Hair Dryer with Cyclone					1.25
Edible Rendering Enclosed System				0.44	3.28
Inedible Rendering System					
Controlled by Cyclone				0.44	3.06
Wastewater Pretreatment System				0.29	
Wastewater Pretreatment System					
Cleaning				0.02	
Chad Sanitizing System with					
Mist Eliminators				0.44	0.44
11 Vacuum Pumps				4.84	4.84
Totals	45	28.36	34.25	8.71	17.11

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